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10/579,715	05/17/2006	Ulrike Licht	289682US0PCT	3498
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
FEELY, MICHAEL J				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
07/01/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

## Office Action Summary

**Application No.**

10/579,715

**Applicant(s)**

LICHT ET AL.

**Examiner**

Michael J. Feely

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 20061012
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Pending Claims***

Claims 1-16 are pending.

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 101/112, 2<sup>nd</sup> paragraph***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10-13 provide for the use of an aqueous composition, but, since the claim does not set forth any steps involved in the method/process (*other than "using"*), it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 16 provides for the use of a coated polymer film, but, since the claim does not set forth any steps involved in the method/process (*other than "using"*), it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 10-13 and 16 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosthauser et al. (US Pat. No. 4,925,885). This is an equivalent to EP 0324370 A.

Regarding claims 1-9, Rosthauser et al. disclose: *(1)* an aqueous composition comprising a polyurethane (A) (Abstract), an epoxy resin (B) obtainable by reacting compounds having epoxide groups with diols or polyols (Abstract; column 9, line 40 through column 10, line 53), and a crosslinker (C) for the epoxy resin (Abstract);

*(2)* wherein the polyurethane is in the form of an aqueous dispersion (Abstract; column 9, lines 4-39);

*(3)* wherein the polyurethane is synthesized from:

a) diisocyanates (column 9, lines 4-39),

b) diols of which b<sub>1</sub>) from 10 to 100 mol%, based on the total amount of diols (b), have a molecular weight of from 500 to 5000 (column 9, lines 4-39; column 3, lines 46-54) and b<sub>2</sub>) from 0 to 90 mol%, based on the total amount of diols (b), have a molecular weight of from 60 to 500 g/mol (column 9, lines 4-39; column 3, lines 46-54),

c) non-(a) and non-(b) monomers having at least one isocyanate group or at least one group reactive toward isocyanate groups, and further carrying at least one hydrophilic or potentially hydrophilic group to make the polyurethanes dispersible in water (column 9, lines 4-39; column 5, line 53 through column 6, line 36),

d) if appropriate, further non-(a) to (c) polyfunctional compounds having reactive groups which are alcoholic hydroxyl, primary or secondary amino or isocyanate groups (*optional*); and

e) if desired, non-(a) to (d) monofunctional compounds having a reactive group which is an alcoholic hydroxyl, a primary or secondary amino or an isocyanate group (*optional*);

(4) wherein the epoxy resin is a reaction product of bisphenol A with epichlorohydrin (column 9, lines 54-65);

(5) wherein the crosslinker C) is a compound having at least two reactive groups which react with epoxides, e.g., isocyanate, amino, carboxyl or hydroxyl groups, preferably amino groups (Abstract); (6) wherein the reactive groups are deactivated or blocked at room temperature (Abstract); (7) wherein the crosslinkers are blocked amine compounds or blocked isocyanate compounds (Abstract);

(8) comprising 1 to 99% by weight of polyurethane A) and 1 to 99% by weight of epoxy resin B), based on the sum of A) and B) (column 11, lines 19-33); and (9) obtainable by

preparing the polyurethane in a solvent and then dispersing it in water, the epoxy resin being added to the solution before the polyurethane is dispersed in water (column 11, lines 3-18).

7. Claims 1-4, 8, 9, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyamoto et al. (US Pat. No. 5,656,701).

Regarding claims 1-4, 8, 9, and 15, Miyamoto et al. disclose: (1) an aqueous composition comprising a polyurethane (A) (Abstract), an epoxy resin (B) obtainable by reacting compounds having epoxide groups with diols or polyols (column 9, lines 20-34; column 15, lines 39-43), and a crosslinker (C) for the epoxy resin (column 9, lines 7-12);

(2) wherein the polyurethane is in the form of an aqueous dispersion (Abstract);

(3) wherein the polyurethane is synthesized from:

a) diisocyanates (column 3, line 5 through column 4, line 2),

b) diols of which b<sub>1</sub>) from 10 to 100 mol%, based on the total amount of diols (b), have a molecular weight of from 500 to 5000 (column 4, lines 3-34) and b<sub>2</sub>) from 0 to 90 mol%, based on the total amount of diols (b), have a molecular weight of from 60 to 500 g/mol (column 4, lines 3-34),

c) non-(a) and non-(b) monomers having at least one isocyanate group or at least one group reactive toward isocyanate groups, and further carrying at least one hydrophilic or potentially hydrophilic group to make the polyurethanes dispersible in water (column 4, line 44 through column 6, line 12),

d) if appropriate, further non-(a) to (c) polyfunctional compounds having reactive groups which are alcoholic hydroxyl, primary or secondary amino or isocyanate groups (column 4, line 44 through column 6, line 12); and

c) if desired, non-(a) to (d) monofunctional compounds having a reactive group which is an alcoholic hydroxyl, a primary or secondary amino or an isocyanate group (column 4, line 44 through column 6, line 12);

(4) wherein the epoxy resin is a reaction product of bisphenol A with epichlorohydrin (column 9, lines 20-34; column 15, lines 39-43);

(8) comprising 1 to 99% by weight of polyurethane A) and 1 to 99% by weight of epoxy resin B), based on the sum of A) and B) (column 9, lines 35-40); (9) *obtainable* by preparing the polyurethane in a solvent and then dispersing it in water, the epoxy resin being added to the solution before the polyurethane is dispersed in water (column 9, lines 20-40: *not explicitly obtained*); and

(15) paper or polymer films coated with laminating adhesives, obtainable by using an aqueous composition comprising a polyurethane (A) an epoxy resin (B) a crosslinker (C) for the epoxy resin (column 9, lines 41-52).

#### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US Pat. No. 5,656,701) in view of Kobayashi (US Pat. No. 5,662,966).

Regarding claims 5-7, the teachings of Miyamoto et al. are as set forth above and incorporated herein. They contemplate the use of a crosslinker in their aqueous composition; however, they fail to explicitly disclose: **(5)** wherein the crosslinker C) is a compound having at least two reactive groups which react with epoxides, e.g., isocyanate, amino, carboxyl or hydroxyl groups, preferably amino groups; **(6)** wherein the reactive groups are deactivated or blocked at room temperature; and **(7)** wherein the crosslinkers are blocked amine compounds or blocked isocyanate compounds.

Kobayashi et al. disclose a similar aqueous composition (*see Abstract; column 7, lines 33-43*). Furthermore, they demonstrate that the instantly claimed crosslinker is recognized in the art as a suitable crosslinker for aqueous based polyurethane/epoxy compositions (*see column 7, lines 7-27*). In light of this, it has been found that the selection of known material based on its suitability for its intended use supports a *prima facie* obviousness determination – *see MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the instantly claimed crosslinker, as taught by Kobayashi et al., in the composition of Miyamoto et al. because the teachings of Kobayashi et al. demonstrate that the instantly claimed crosslinker is recognized in the art as a suitable crosslinker for aqueous based polyurethane/epoxy compositions.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosthauser et al. (US Pat. No. 4,925,885) in view of Kobayashi (US Pat. No. 5,662,966).

Regarding claim 15, the teachings of Rosthauser et al. are as set forth above and incorporated herein. They disclose the use of substrate supports (*see column 11, lines 33-43*);



however, they fail to explicitly disclose: **(15)** paper or polymer films coated with laminating adhesives, obtainable by using an aqueous composition comprising a polyurethane (A) an epoxy resin (B) a crosslinker (C) for the epoxy resin.

Kobayashi et al. disclose a similar aqueous composition (*see Abstract; column 7, lines 33-43*). Furthermore, they demonstrate that the instantly claimed substrates are recognized in the art as suitable support substrates for aqueous based polyurethane/epoxy compositions (*see column 7, lines 38-43*). In light of this, it has been found that the selection of known material based on its suitability for its intended use supports a *prima facie* obviousness determination – *see MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the instantly claimed substrates, as taught by Kobayashi et al., as support substrates for the composition of Rosthauser et al. because the teachings of Kobayashi et al. demonstrate that the instantly claimed substrates are recognized in the art as suitable support substrates for aqueous based polyurethane/epoxy compositions.

### ***International Search Report***

11. The international search report cited five X-references. All of them have been considered; however, only Rosthauser et al. has been applied. This is the most comprehensive of all the X-references.

*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/  
Primary Examiner, Art Unit 1796

June 23, 2008